AMERICAN ANNALS OF THE DEAF

FOUNDED 1847

Official Organ

Conference of Executives of American Schools for the Deaf

FOUNDED 1868

American Instructors of the Deaf

FOUNDED 1850

POWRIE VAUX DOCTOR, Ph.D
Editor

D. ROBERT FRISINA, Ph.D.
Associate Editor

Under the Direction of the Executive Committee of the Conference

MARSHALL S. HESTER, *Chairman*	New Mexico, 1960
WILLIAM J. MCCLURE	Indiana, 1960
HUGO F. SCHUNHOFF	West Virginia, 1960
STANLEY D. ROTH	Kansas, 1960
EDMUND B. BOATNER	Connecticut, 1960
THOMAS K. KLINE	Illinois, 1960
GEORGE T. PRATT	Massachusetts, 1961
DANIEL T. CLOUD	New York 1961
C. E. MACDONALD	British Columbia, 1962
SAM B. CRAIG	Pennsylvania, 1962

SEPTEMBER, 1959

Volume 104 **Number 4**

THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

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Vice President ..... William J. McClure, Indiana
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The Conference of Executives of American Schools for the Deaf, originally the Conference of Superintendents and Principals of American Schools for the Deaf, was founded in 1868 and subsequently incorporated under the laws of the State of Maryland in 1958. The Conference is an organization of the executive heads of schools for the deaf in the United States and Canada, and has for its object "to promote the management and operation of schools for the deaf along the broadest and most effective lines and to further and promote the general welfare of the deaf."

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The American Instructors of the Deaf, founded in 1850 and incorporated by act of Congress in 1897, is an organization of educators of the deaf in the United States and Canada with the general object of "promotion of the education of the deaf on the broadest, most advanced, and practical lines," and for that purpose "to secure the harmonious union in the organization, of all persons actually engaged in educating the deaf in America."

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The American Annals of the Deaf

The AMERICAN ANNALS OF THE DEAF was founded in 1847 at the American School for the Deaf in Hartford, Connecticut, by the members of the faculty of that school, which is the first free public school for the deaf in America. Although the journal received the approval of the administrative school authorities, the periodical was first entirely sponsored by the members of the faculty. After two years the ANNALS was discontinued for some months but was revived by the members of the American Instructors of the Deaf in their first meeting in New York, N. Y., in 1850.

In June, 1861, the publication ceased because of the War Between the States, inasmuch as the membership was made up of northerners and southerners in almost equal proportion. In September, 1868, the AMERICAN ANNALS OF THE DEAF resumed publication with the editorial office on Kendall Green, in Washington D. C., where it has since remained.

The AMERICAN ANNALS OF THE DEAF is the official organ of the Conference of Executives of American Schools for the Deaf, which was organized in 1868, and of the American Instructors of the Deaf, founded in 1850. According to the Library of Congress it is the oldest educational publication in the United States still in existence. It is also the oldest journal on the education of the deaf in the world.

The ANNALS is published five times a year, being issued in September, November, January, March, and May. The subscription price is $5.00 a year, payable in advance. If five or more copies of the ANNALS are sent to one address, the subscription price is $3.50 a year. Single numbers sell for one dollar, except for the January number which sells for $3.00. Back issues are available for 1847, 1848, 1849, 1857, and from September, 1868, to the present. Indexes for 1847–1875, 1876–1885, 1886–1895, 1896–1905, are available at $4.00 each. Indexes for 1906–1915, 1916–1925, 1926–1935, 1936–1945, 1946–1955, were issued as regular numbers of the ANNALS and may be purchased for $3.00 each. From 1956 indexes are included in the regular November numbers at single copy price. All requests for subscriptions or for back numbers should be addressed to Editor, AMERICAN ANNALS OF THE DEAF, Gallaudet College, Washington 2 D. C.

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AMERICAN ANNALS OF THE DEAF

Vol. 104 September, 1959 No. 4

Announcements

The annual meeting of The American Speech and Hearing Association will be held in Cleveland, Ohio, Nov. 11th to the 14th, 1959. The headquarters for the meeting will be at the Statler Hotel.

The White House Conference on Children and Youth will be held in Washington, D. C., March 27 to April 2, 1960.

Official Call for the Thirty-second Regular Meeting of The Conference of Executives of American Schools for the Deaf

The thirty-second regular meeting of the Conference of Executives of American Schools for the Deaf will be held at Northwestern University, Evanston, Ill., April 3 through Friday, April 8, 1960, for the purpose of conducting the necessary business, including reports of the officers and chairmen of standing committees, and the election of executive committee members, and such other business as may properly come before the meeting. The headquarters for the meeting will be at the North Shore Hotel, Evanston, Ill.

Marshall S. Hester, President
Hugo F. Schunhoff, Secretary

The Council for Exceptional Children will hold its annual meeting at the Biltmore Hotel in Los Angeles, Calif., April 19–23, 1960.

The annual meeting of the Alexander Graham Bell Association for the Deaf will be held in Rochester, New York, June 27th to July 1st., 1960, at the Rochester School for the Deaf. Headquarters for the meeting will be at the Manger Hotel. James T. Galloway, Supt., Rochester School for the Deaf, is Chairman of the Local Committee, and Leo Connor, Ass't. Supt., Lexington School for the Deaf, New York, N. J., is Chairman of the Program Committee.

American Instructors of the Deaf Meet in Colorado

RICHARD G. BRILL, ED.D., *President*
American Instructors of the Deaf

The 39th meeting of the American Instructors of the Deaf was held at the Colorado School for the Deaf and the Blind in Colorado Springs, Colo., June 28 to July 3, 1959. This meeting was unique in the history of this organization, as it was planned and organized as a workshop type of meeting in contrast to the traditional meetings which have been characterized by the presentation of papers and reports.

At the opening session on Sunday evening, in addition to the formalities of welcoming addresses, reports were made by the three representatives of the American Instructors of the Deaf who attended the International Congress on the Modern Educational Treatment of Deafness held at Manchester, England, in 1958. Dr. Edward R. Abernathy reported as the president and delegate from the American Instructors of the Deaf, Miss Alyce Thomas as the representative of the hearing teachers of the deaf, and W. T. Griffing as the representative of the deaf teachers of the deaf.

The program of the convention of American Instructors of the Deaf was organized with four major sections meeting each day. In general, the plan was to have each section meet as an entire group for forty-five minutes during which time a keynote paper or address was given. Following this, the general section broke up into workshop groups with a maximum of twenty individuals in each group. These groups met for an hour and a half in the morning and again for an hour and a half in the afternoon, afterwards reporting back to the general session of their over-all section for a half hour at the close of the day. A training session was held on Sunday afternoon to help the section leaders, workshop leaders, and recorders in preparation for their duties in the workshops.

An objective evaluation of the success of this type of convention was attempted by giving each person registering an evaluation form. On the face of the form he could indicate whether each of the general sections was fair, good, or excellent. In addition, he was asked to make comments in regard to his expectations of the convention and how these expectations were fulfilled. The participant was also requested to indicate how he thought the convention could be improved, and to make any other comments he desired.

A total of approximately 740 people registered at this convention, and with 136 evaluation forms returned the reactions of 18% of those attending were recorded. This percentage should be a fairly typical sample of the reactions of the group as a whole.

At previous conventions, a time in the middle of the week, generally Wednesday, had been fully or partly devoted to sight-seeing or some special recreational event. At this convention, the sight-seeing date was specified as Friday, with the direct purpose of trying to hold the people at the convention for most of the week rather than, as had so often been the case in the past, having many of the people leave the convention after the recreational period and thus missing the last day or two days of the convention. The evaluation form asked the people to vote as to whether they preferred the trips at the end of the week as they were scheduled in Colorado, or during the middle of the week. The vote on the matter of the trip was practically two to one in favor of holding the trips at the end of the convention as was done in Colorado. The actual vote was 76 in favor of the end of the convention, against 39 favoring trips during the middle of the convention.

It is recognized that the reactions of any particular individual would be greatly influenced by the leadership of his workshop sections. With a group this large it was inevitable that the leadership in some workshops would leave something to be desired, particularly as it was not possible to get enough people to commit themselves as workshop chairmen before the meeting convened at Colorado. Thus, there were a number of workshop leaders who had to be drafted at the last moment and who, in many cases, were not prepared for this type of meeting and who had not attended the general training session held on Sunday. In spite of this, the number of people who voted *Good* for each section was greater than the number of people who voted *Fair* for each section. In addition to those who voted *Good* were the large number of people who voted *Excellent,* so that the favorable reactions were significantly greater than those which tended to be neutral or negative. In the general comments, the vote for the program as a whole was as follows: one voted *Poor,* 10 voted *Fair,* 58 voted *Good,* and 38 voted *Excellent.* The vote for the group discussions was 24 *Fair,* 54 *Good,* 23 *Excellent.*

There were many individual comments on how the convention could have been improved and, of course, many of these individual comments were duplicates. The most frequent objection was to the effect that there were no demonstrations. The thinking of the Program Committee in omitting demonstrations at this convention had been that generally most demonstrations are quite artificial. This is because the children who are demonstrating are a carefully selected group who have usually been specifically rehearsed by the teacher who is doing the demonstrating, and they appear in a very artificial situation by having a demonstration on a stage rather than in their own classroom. In spite of this, it is apparent that the group as a whole desires demonstrations at future conventions, and it would seem advisable for the future Program Committee to take this into account.

There were some comments in regard to leadership for the

workshops, both positive and negative. As was indicated above, this had been recognized as a problem and can perhaps be improved upon at future meetings if the workshop program is not used as extensively. With fewer workshops, it may be possible to obtain well qualified leaders for the workshops that are held. It is quite probable that certain sections lend themselves to a workshop type of program better than other sections. Sections which are dealing with techniques rather than ideas probably can function better with papers and demonstrations, while those subjects which are a little broader in scope perhaps lend themselves better to the workshop approach.

There were many positive comments about the convention, ranging from just plain statements that individuals liked the workshop type of program and that their expectations were completely fulfilled, to specific statements about particular individual participants who were highly commended.

Unquestionably, those who were responsible for putting on this particular convention learned a great deal about this kind of a program, and could improve upon it if they were to do it again. This knowledge should be helpful in planning the next meeting.

Participants were wholeheartedly enthusiastic in their appreciation of the excellent hospitality of all members of the staff of the Colorado School for the Deaf and the Blind, and many expressed the desire to have their appreciation made known to the members of that staff.

At the business meeting, a number of amendments to the constitution were adopted including one which eliminates the list of seventeen sections which have been established over the years, and gives the president of the organization the authority to appoint directly section leaders for future conventions rather than have them elected by the group as a whole. This will greatly facilitate the mechanics of organizing future conventions. The following slate of officers was elected: President, Richard G. Brill, California; First Vice-President, Roy M. Stelle, Colorado; Second Vice-President, Edward W. Tillinghast, Arizona; Secretary, Genevieve M. Ryan, New York; Treasurer, Thomas Dillon, New Mexico; Directors: Edward R. Abernathy, Ohio; Lloyd A. Ambrosen, Maryland; Ben E. Hoffmeyer, North Carolina; Archie F. Leard, Saskatchewan.

The report of the meeting will be published in the *Proceedings* at a future date.

Conference Meets in Colorado Springs

The members of the Conference of Executives of American Schools for the Deaf held their Thirty-first Regular meeting at the Colorado School for the Deaf and the Blind on June 30 and July 1. Reports were given by the chairmen of the various committees and by the officers of the Conference, Marshall S. Hester, President, Dr. Hugo F. Schunhoff, Secretary, and Stanley Roth, Treasurer. Two new members were elected to the Executive Committee of the Conference, Dr. Charles E. McDonald, Supt., Jericho Hill School, Vancouver, British Columbia, Canada, and Dr. Sam B. Craig, Supt., Western Pennsylvania School, Pittsburgh, Pa.

Dr. Howard M. Quigley, Chairman, Committee on Teacher Training and Certification, made a report on teacher training and certification for Centers for the Training of Teachers of the Deaf and for the A and B certificate. The report of this Committee is published elsewhere in this issue of the *Annals*.

The complete report of the Conference meeting will be published in mimeographed form and later in the *Proceedings* of the American Instructors of the Deaf.

The Thirty-second Regular Meeting of the Conference of Executives of American Schools for the Deaf will be held at Northwestern University in Evanston, Ill., April 3 through April 8, 1960.

Minimum Course Requirements to Be Included in a Program for Preparation of Teachers of the Deaf in Centers Approved by the Conference of Executives of American Schools for the Deaf*

I. Following are the minimum course requirements that are to be included in a teacher preparation program for those training centers to be approved by the Conference of Executives of American Schools for the Deaf. Suggested minimum and maximum semester hours of credit are indicated for each course. It is recognized that course content rather than course title is the guide.

	Sem. Hrs. Min.	Max.
A. *The Teaching of Speech to the Deaf*	4	6

This course should include a study of the principles and techniques used in developing the formation of English sounds by the analytical method and also the introduction of speech by the whole-word method. Some time should be devoted to the correction of speech defects in the hard of hearing, but the major emphasis should be placed on the development of speech in the preschool and school-age deaf child. It is essential that demonstrations and practice with deaf children under expert supervision be an integral part of this course. The course should include special consideration of the speech problems of the deaf child with multiple handicaps.

B. *The Teaching of Language to the Deaf*	4	6

This course should include a study of the principles and techniques of teaching language to the preschool and school-age deaf. The student should become familiar with the leading systems of teaching language to the deaf and should become familiar with the step-by-step development of at least one language system. The material in *Outline of Language for Deaf Children* by Edith M. Buell or the *Language Outline* prepared by a committee of teachers at the Central Institute for the Deaf should form the basis of this course. The course should include consideration of the language problems of deaf children with multiple handicaps.

* The revised set of requirements was adopted at the meeting of the Conference of Executives of American Schools for the Deaf in Colorado Springs, Colorado, June 30 and July 1, 1959.

C. *Methods of Teaching Elementary School Subjects to the Deaf* 4 6

This course should include principles and methods of teaching reading to deaf children in the lower and higher grades. Methods of teaching subjects such as arithmetic, social studies, and science should be considered in this course. Particular emphasis should be placed on methodology in the intermediate and advanced grades. This course should also include consideration and use of visual aids in classes for the deaf.

D. *Methods of Teaching Speechreading (Lipreading) to the Deaf and the Hard of Hearing* 2 3

The various principles and techniques of teaching speechreading should be studied. Familiarity with such methods as the Nitchie, Jena, Kinzie, Müller-Walle and others, and research pertaining to lipreading should be a part of this course.

E. *History, Education, and Guidance of the Deaf* 2 3

This course should cover the history of the education of the deaf, and the evaluation of the place of the deaf in the community from a social, economic, and political viewpoint from ancient times to the present. The course should help the student become familiar with the bibliographic source materials in the field on the education and welfare of the deaf. Research studies related to the psychology of the deaf, social adjustment of the deaf, and studies related to the learning problems of the deaf should be considered. The student should become familiar with the place of the adult deaf in today's society.

F. *Auditory and Speech Mechanisms* 2 3

This course should include a study of the anatomy, physiology, and pathology of the speech and hearing mechanisms.

G. *Hearing Tests and Auditory Training* 2 3

The techniques and interpretation of pure tone hearing tests and an introduction to speech audiometry should be included in this course. Audiogram interpretation and at least ten air and bone conduction tests should be completed on children of varying ages who are in schools or classes for the deaf. The students should be introduced to several types of amplification systems used in schools and classes for the deaf.

In auditory training, the student should learn the techniques and principles of auditory training with special reference to such programs in schools and classes for the deaf.

	Min.	Max.
II. *Observation and Student Teaching*	6	10

Facilities for observation of classroom procedures and student teaching should be sufficiently extensive so that the deaf pupils are well graded. This implies at least six classes at different grade levels, including preschool if possible. The student should be required to do at least some practice teaching under direct supervision on several grade levels, in order that he might have an understanding of the over-all educational problems of the deaf child.

	Min.	Max.
Total Semester Hours	26	40

II. (1) The above minimum course requirements presuppose that the student has had work in the area of Education, preferably a major in Elementary Education. The student should have had, or should be taking concurrently, a course in Child Growth and Development, and a course in the Psychology or Education of the Exceptional Child.

(2) Upon request, training centers established in the future will be evaluated by a sub-committee of one or more members of the Conference of Executives appointed by the Chairman of the Teacher Training and Certification Committee. The criteria listed in Section I will be used for evaluation of new training centers until such time as these requirements are changed by majority vote of the members of the Conference of Executives.

Revision of Requirements for Class A and Class B Certification

Conference of Executives of American Schools for the Deaf*

Class A — Academic

To be eligible for this certificate the following three requirements must be met:

1. All candidates for a Class A certificate must hold at least a bachelor's degree from an accredited college or university.
2. All candidates for a Class A certificate must have satisfactorily completed a program of preparation as a teacher of the deaf at a training center which has been evaluated and approved by the Conference of Executives of American Schools for the Deaf.
   a. Deaf graduates of Gallaudet College who major in Education will meet this requirement.
3. Following the preparation, three years of successful teaching experience under qualified supervision is required for a permanent certificate. A temporary certificate may be granted following preparation and before the necessary experience is completed.

In lieu of the above requirements, this Class A certificate may be granted when, in the judgment of the Certification Committee, applicants have qualified through executive or administrative positions or distinguished service in education of the deaf.

Class B — Academic

To be eligible for this certificate the following two requirements must be met:

1. All candidates for a Class B certificate must hold at least a bachelor's degree from an accredited college or university.
2. (a) Completion of 24 semester hours in education of the deaf, such courses to be subject to the approval of the Teacher Training and Certification Committee of the Conference of Executives, and three years of teaching experience with deaf children,

or

* The revised set of requirements was adopted at the meeting of the Conference of Executives of American Schools for the Deaf in Colorado Springs, Colorado, June 30 and July 1, 1959.

(b) Completion of eight years of satisfactory teaching experience with deaf children, attested to by a supervisor or administrator of a school for the deaf.

These requirements are to become effective September 1, 1959. Applicants for certification who completed their preparation to teach the deaf before this date will be evaluated on the basis of requirements previously in effect.

Ability of Deaf Swimmers to Orient Themselves when Submerged in Water[1]

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ABSTRACT

A study was conducted of the effect of submersion upon the sense of orientation of deaf swimmers. The deaf swimmers were classified into groups of those who were born deaf, those who were meningitic, those deaf from other causes, and those deaf from unknown causes. They performed two orientation tests along with a group of normal hearing swimmers. One test was the submerging of subjects under water from a rotating board with the eyes open and the other test was similar but with the eyes blindfolded. A statistical analysis of the data indicated that the meningitis group made a statistically significant slower time in coming up to the surface than the other groups.

In order to maintain equilibrium of the body, constant nervous activity is necessary. This must be regulated by the central nervous system, which in turn is stimulated by the messages received from the various sensory receptors that indicate the movements affecting equilibrium. The sensory receptors which make up the complex mechanism of equilibrium are the eyes, the organs of touch in the skin and the proprioceptors in the muscles and joints, and the vestibular apparatus of the ears. These sensory functions are all delicately coordinated in the maintenance of equilibrium.

Upon impairment of one of the three components, equilibrium is affected until the other components compensate for the deficiency and reestablish equilibrium. The inner parts of the ears contain the organs of hearing and equilibrium and because of the proximity of the auditory and vestibular structures, individuals suffering deficiencies in hearing sometimes show vestibular defects. For that reason, the deaf, as a group, are known to be deficient in the sense of equilibrium. This problem has intrigued scientists for many years, and they have studied deaf subjects with various tests such as tracing the body sway while standing still, recording

[1] This study was done in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Physical Education, Recreation, and Health, University of Maryland. The writer is indebted to Benjamin H. Massey for assistance and guidance throughout the study.

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electrically the length of the arc of the swing while standing on a balancing platform, observing the presence or absence of nystagmus or dizziness after being turned around on a rotating chair, and measuring distance while walking on rails.

In articles on the balancing ability of the deaf, James (5), Obersteiner (8), Morsh (7), Edward (4), Davis (3), and Best and Taylor (1) have pointed out that the deaf are known to lose their sense of orientation if, while swimming, they become submerged in water. The statements apparently were based solely upon experiments conducted on lower animals such as the studies by Prentiss (9), Streeter (10), and Camis (2), or upon information given by the deaf themselves. Insofar as this investigator could determine, no investigation has been made as to how much difficulty deaf swimmers actually do encounter in finding their bearings when submerged in water. A study along these lines is important since such information is fundamental for all physical education dealing with the deaf.

Purpose

The purpose of this study was to determine by means of an improvised test the relationship of deafness to the sense of orientation when a deaf subject was submerged in water. The specific purposes were (a) to determine the relationship of deafness from various causes to the ability of deaf subjects to orient themselves under water as indicated by the time measured in seconds that it took each deaf subject submerged in water to locate the surface, (b) to determine if the sense of orientation so measured would be affected by having the deaf subjects blindfolded while being submerged, and (c) to determine whether the sense of orientation is influenced by a deficiency in equilibrium, both with eyes open and blindfolded.

Procedure

Subjects. The subjects selected to participate in the experiment were 105 deaf and hard of hearing male students enrolled at Gallaudet College, Washington, D. C., and 23 normal male students from neighboring schools and colleges. The subjects ranged in age from 15 to 30 years, in height from 63 to 78 inches, and in weight from 123 to 205 pounds. All subjects were in good health, and with the exception of deafness none of them suffered any gross physical defects. At the time of the experiment the deaf subjects were in the regular, required physical education program. To qualify as a subject each individual had to satisfy a minimal requirement of being able to swim.

Apparatus. The apparatus used in the experiment consisted of a 4-inch square wooden beam, 18 feet long, and a rotating board made of plywood in octagonal shape, measuring 42 inches in diameter and ¾ inch thick. At the middle of the beam a round steel pin was driven into the wood, leaving approximately 2 inches exposed upon which the board could be rotated. The

testing took place in a swimming pool 35 feet long and 14 feet wide. The depth ranged from 4 feet at the shallow end to 8 feet at the deep end. The beam was placed across the width of the pool and over water which was 7½ feet deep. Then on the steel pin in the beam was laid the rotating board, the top of which was 2 feet above the water, corresponding to the height of a diving board.

Administration of Tests. The procedure consisted of two tests, one in which the subjects were tested with their eyes open and the other with their eyes blindfolded. A woman's swimming cap pulled over the eyes served as the blindfold.

Initially the subject's age, height, and weight were recorded. He was then instructed to sit on the rotating platform in a squatting position, to wrap his arms firmly about his legs, and to bow his head (see Figures I and II). In order to disorient the subject, the platform was turned around once, twice, or three times in a clockwise, counterclockwise, or both directions. It was then tilted, throwing the subject into the water forward, backward, or to either his right or left side. The subject was instructed to keep the squatting position with the arms around the legs until fully immersed, after which he was to immediately start swimming for the surface (see Figures III and IV).

The eyes open and eyes blindfolded tests consisted of 20 trials each. The eyes open test was always administered before the eyes blindfolded test; in other words, all 20 trials of the eyes open test were given before all 20 trials of the eyes blindfolded test. This procedure was a matter of arbitrary choice for ease of administration since no advantage could be seen to be derived from administering the eyes blindfolded test first or alternating the eyes open and eyes blindfolded tests. In each test the submerging was repeated five times from each of the four positions, forward, backward, right side, and left side. The direction of tipping was varied so that the subject would have no prior knowledge as to which way he would be thrown. No two sequences of submerging subjects were the same as the investigator consciously tried to mix up the sequence and not to follow a set pattern.

Trials in which the subject let go the hold on his legs before hitting the water, touched the bottom of the pool, pulled off the blindfold while still under water, or did not attempt to swim under water were cancelled. The reasons for this were that (1) the subject could prevent himself from becoming completely submerged by allowing a greater area of body surface to spread over the water, (2) touching the bottom would become a fixed point of reference for orientation under water, (3) the subject would depend on vision for finding the surface, and (4) the body would rise due to the force of buoyancy if he remained quiet, thus providing a cue as to the direction of the surface.

The subject was timed from the moment any part of his body hit the water until his head appeared above water. Three stop

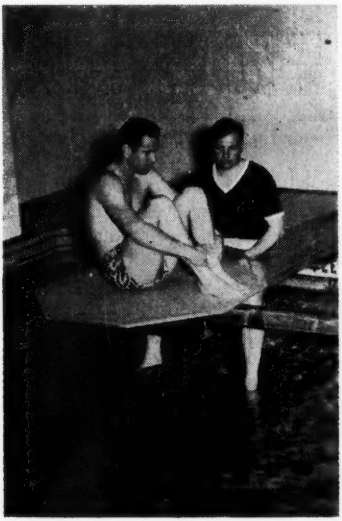

FIGURE I. A subject with eyes open waiting to be thrown into the water

FIGURE II. A subject with eyes blindfolded waiting to be thrown in.

FIGURE III. A subject falling into the water.

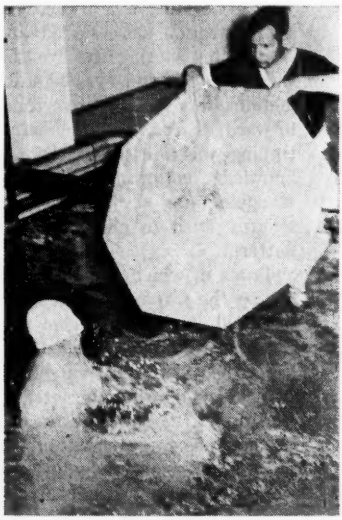

FIGURE IV. A subject's head appearing above the water after immersion.

watches were used in timing the trials, and the average time of the three for each trial was used as the score. The investigator administered the submerging phase of the testing program while the deaf and hard of hearing subjects themselves took turns at keeping time and recording scores for fellow subjects. The normal hearing subjects, however, were not permitted to keep time as it was believed that the response of a hearing timer to cues might be different from that of a non-hearing timer. One of the principles of perceptual speed and quick responses listed by Lawther (6) reads as follows: "Auditory cues, when occurring close to the athlete, are responded to more quickly than visual cues."

Organization of Data. The time scores of each subject were recorded and then averaged into two separate mean scores, one representing the eyes open test and the other the eyes blindfolded test.

The subjects were grouped in two ways: (1) on the basis of the kind of deafness and (2) on the basis of ability to maintain equilibrium. In grouping on the basis of deafness, five groups were formed: born deaf, meningitis, other causes, undetermined, and normal. The records of their causes of deafness were obtained from the files in the Office of the Registrar at Gallaudet College. These groups were selected on the basis of its being customary to group the deaf and hard of hearing into two main categories, namely, congenitally deaf and adventitiously deaf. Congenital deafness is present at the time of birth and adventitious deafness occurs after birth through illness or accident. In the case of the adventitiously deafened, it seemed advisable to subdivide into two groups. One group was composed of meningitis cases and the other of all other causes of deafness such as mastoiditis, measles, mumps, etc. The reason for separating meningitis from the other causes was that meningitis is thought to be the foremost cause of sufficient labyrinthic injury to induce deafness or loss of equilibrium or both. There were some subjects whose causes of deafness were unknown so another group was established to include these undetermined cases. Finally, for the sake of comparison, a fifth group was formed, composed of normal hearing subjects.

With respect to equilibrium, the subjects were placed in two groups, those exhibiting good balance and those lacking the same. Classification of the subjects was subjective in that it was accomplished by observing the subjects on the rotating platform and their ability to maintain equilibrium while being turned around with the eyes blindfolded. Most of the subjects were able to maintain their equilibrium fairly well even when the investigator turned the platform around rapidly, alternated the clockwise or counterclockwise turns of the platform, or alternately stopped and resumed the rotation of the platform. A minority of the subjects were not so successful in maintaining their equilibrium and the investigator was forced to turn the platform slowly or to

pause the rotation in order to restrain the subjects from toppling over.

It should be noted that the meningitis and poor balance groups were not identical. The poor balance group included most of the subjects whose hearing was rendered nonfunctional by the disease of meningitis and four subjects obtained from the other groups of the first classification, two born deaf, one measles, and one unknown. These last four subjects might well have had defective vestibular labyrinths accompanying their deafness. Six of the 30 meningitis cases showed surprisingly good balance while sitting on the rotating platform, and for that reason they were classified in the good balance group. The disease might have left their labyrinths intact while causing deafness.

It is said that it is possible for a person to have nonfunctioning labyrinths while his hearing is normal. The normal hearing subjects, however, all demonstrated good balance and were included in the good balance group.

Statistical Treatment of Data. First, the reliability of the data for the eyes open and eyes blindfolded tests was determined. Thirty subjects chosen at random from the different groups repeated both tests on different days ranging from a few days to several weeks under conditions as nearly identical as possible. Coefficients of correlation between the test and re-test performances were computed. The t ratio was used to determine the statistical significance of the mean differences between the performances. Second, the differences between the means of the different groups were tested against the null hypothesis based on the "students" distribution to determine their significance. The means, along with the variances and the standard deviations, were calculated from the average time scores on the record sheets. The average time scores were actually the averages of 20 trials which each subject was requested to take in each of the two tests. The F ratio for variances was also computed for items demonstrating significant mean differences at the .05 level of confidence.

Findings

Reliability of Data. The reliability coefficients by the test re-test method were found to be .74 for the eyes open test and .85 for the eyes blindfolded test. As for the significance of the differences between the means of the test and re-test performances, a t ratio of 5.99, significant at the 1 percent level of confidence, was found on the eyes open test and a t ratio of only 1.79 was for the eyes blindfolded test. While some improvement was shown in both tests, only the improvement in the eyes open test was found to be statistically significant, indicating that learning probably occurred in that test.

Equivalence of Groups. In Table 1 are listed the average ages, heights, and weights of the different groups in both classifications. The groups were approximately of the same age and body build.

This was in accordance with the efforts of the investigator to equate the groups on these factors.

TABLE 1.—NUMBER AND AVERAGE AGE, HEIGHT, AND WEIGHT OF GROUPS PARTICIPATING IN THE ORIENTATION TESTS

Classification	Number	Age	Height	Weight
Congenital (Born Deaf)	28	21	5′10″	159
Adventitious (Meningitis)	30	21	5′ 9″	159
(Other Causes)	30	21	5′ 9″	158
Undetermined	17	21	5′10″	163
Normal	23	22	5′10″	157
Good Balance	100	21	5′10″	158
Poor Balance	28	21	5′10″	160

TABLE 2.—MEANS, VARIANCES, AND STANDARD DEVIATIONS OF GROUPS FOR THE EYES OPEN AND EYES BLINDFOLDED TESTS

		Eyes Open Test			Eyes Blindfolded Test		
Classification	Number	Mean	Variance	Standard Deviation	Mean	Variance	Standard Deviation
Congenital (Born Deaf)	28	1.74	0.22	0.47	1.62	0.16	0.40
Adventitious (Meningitis)	30	2.08	0.23	0.48	2.26	0.39	0.63
(Other Causes)	30	1.77	0.19	0.43	1.68	0.13	0.36
Undetermined	17	1.73	0.16	0.40	1.56	0.08	0.29
Normal	23	1.58	0.10	0.32	1.52	0.12	0.34
Good Balance	100	1.71	0.16	0.40	1.60	0.12	0.34
Poor Balance	28	2.12	0.24	0.49	2.32	0.40	0.63

TABLE 3.—SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS FOR THE EYES OPEN AND EYES BLINDFOLDED TESTS

Classification	Degrees of Freedom	Mean Difference	t Ratio	F Ratio
Congenital (Born Deaf)	27	0.12	1.03	1.34
Adventitious (Meningitis)	29	0.18	1.27	1.70
(Other Causes)	29	0.09	0.88	1.47
Undetermined	16	0.17	1.42	1.97
Normal	22	0.06	0.61	1.16
Good Balance	99	0.11	2.12[a]	1.39
Poor Balance	27	0.20	1.32	1.65

[a] Significant at the 5 percent level of confidence.

Differences in Orientation with Eyes Open and Blindfolded. The means, variances, and standard deviations are shown in Table 2. In Table 3 is presented the significance of the mean differences for the various groups between the eyes open and eyes blindfolded tests. It is interesting that the meningitis group in the first classification and the poor balance group in the second classification were the only groups that failed to show any decrease in the eyes blindfolded test over the eyes open test. However, the obtained t ratios of 1.27 for the meningitis group and 1.32 for the poor balance group were significant only at the .20 level of confidence and not at the .05 or .01 levels set for rejection of the null hypothesis. As for the remaining five groups which made a better performance in the eyes blindfolded test than in the eyes open test, the differences were also found not to be statistically significant within the 1 or 5 percent level of confidence. The t ratio of 2.12 for the good balance group, however, was significant at the 5 percent level of confidence. No F ratios were significant at the 5 percent level of confidence.

Although not statistically significant, it seems important that the meningitis and poor balance groups apparently experienced more difficulty in the eyes blindfolded test than in the eyes open test. This was made more convincing by the fact that the other groups reacted conversely, showing better performance in the eyes blindfolded test than in the eyes open test.

Differences between Groups with Eyes Open. The differences between the mean performances for the various groups for the eyes open test are presented in Table 4. The meningitis group was the only one in the first classification that differed significantly

TABLE 4.—SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF GROUPS IN THE EYES OPEN TEST

Group	Degrees of Freedom	Mean Difference	t Ratio	F Ratio
Born Deaf vs. Meningitis	56	0.34	2.83[a]	1.06
Born Deaf vs. Other Causes	56	0.03	0.25	1.18
Born Deaf vs. Undetermined	43	0.01	0.07	1.37
Born Deaf vs. Normal	49	0.16	1.45	2.19
Meningitis vs. Other Causes	58	0.31	2.58[b]	1.25
Meningitis vs. Undetermined	45	0.35	2.50[b]	1.45
Meningitis vs. Normal	51	0.50	4.17[a]	2.32
Other Causes vs. Undetermined	45	0.04	0.31	1.17
Other Causes vs. Normal	51	0.19	1.73	1.86
Undetermined vs. Normal	38	0.15	1.36	1.60
Good Balance vs. Poor Balance	0.41	126	4.56[a]	1.49

[a] Significant at the 1 percent level of confidence.
[b] Significant at the 5 percent level of confidence.

from all the other groups. The t ratios of 2.58 between the meningitis and other causes groups and of 2.50 between the meningitis and undetermined groups were statistically significant at the 5 percent level of confidence. The t ratio for the meningitis group and two other groups, born deaf and normal, were significant at the 1 percent level. In the second classification, the difference between the means of the good balance and poor balance groups was statistically significant within the 1 percent level of confidence. None of the F ratios was found to be significant at the 5 percent level of confidence.

The results of the eyes open test indicate that even with vision unobstructed the meningitis and poor balance groups had more trouble retaining their sense of orientation under water and needed a longer time for finding their way to the surface than the other groups.

Differences between Groups with Eyes Blindfolded. From Table

TABLE 5.—SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF GROUPS IN THE EYES BLINDFOLDED TEST

Group	Degrees of Freedom	Mean Difference	t Ratio	F Ratio
Born Deaf vs. Meningitis	56	0.64	4.57[a]	2.42[c]
Born Deaf vs. Other Causes	56	0.06	0.60	1.29
Born Deaf vs. Undetermined	43	0.06	0.54	2.00
Born Deaf vs. Normal	49	0.10	0.91	1.41
Meningitis vs. Other Causes	58	0.58	4.46[a]	3.11[b]
Meningitis vs. Undetermined	45	0.70	4.38[a]	4.86[b]
Meningitis vs. Normal	51	0.74	4.93[a]	3.40[b]
Other Causes vs. Undetermined	45	0.12	1.20	1.56
Other Causes vs. Normal	51	0.16	1.60	1.09
Undetermined vs. Normal	38	0.04	0.40	1.43
Good Balance vs. Poor Balance	126	0.72	8.00[a]	3.44[b]

[a] Significant at the 1 percent level of confidence.
[b] Significant at the 2 percent level of confidence.
[c] Significant at the 4 percent level of confidence.

5, it can be seen that in the eyes blindfolded test none of the groups in the first classification differed significantly from each other, except the meningitis group. This group differed significantly from all of the other groups at the 1 percent level of confidence. Likewise the mean of the poor balance group was significantly different from that of the good balance group well beyond the 1 percent level. The F ratios between the meningitis group and each of the four remaining groups and between the good balance and poor balance groups were statistically significant within the 5 percent level of confidence.

Variation in times for the meningitis and poor balance groups was greater than for the other groups as was shown by the significant F ratios; hence, the t test for difference between means was not conclusive because of the possible effect of variance in times on the means.

Discussion

Concerning the test re-test performances of the 30 randomly picked subjects, the results showed that the subjects made a significant improvement in the eyes open test and an insignificant improvement in the eyes blindfolded test. However, it is difficult to determine that learning occurred in the eyes open test and not in the eyes blindfolded test due to the procedure of administering the tests. It may be possible that the reliability of the eyes open test was relatively poor because it was always the first test administered in the procedure or, on the other hand, that the reliability of the eyes blindfolded test was good because it was always the second test administered in the procedure. Had the order of conducting the two tests been reversed, the results might have been reversed.

The results of the investigation as applied to the effect of submersion upon the sense of orientation of deaf swimmers seem to indicate that in both the eyes open test and eyes blindfolded test given to the deaf and hard of hearing subjects as well as to the normal subjects, the meningitis and poor balance groups had considerably more difficulty in coming to the surface than the other groups. The results also show that unlike the other groups they performed more poorly in the eyes blindfolded test than in the eyes open test although at a statistically insignificant level. During the course of the experiment it was the meningitis cases or the subjects with poor balance who hindered the study to some extent, especially in the eyes blindfolded test, by repeatedly letting go the hold on the legs, touching the bottom of the pool, or pulling off the blindfold before appearing above the surface. They touched the bottom by pure accident when they swam down thinking they were ascending and through touch they quickly and easily found the surface. Sometimes they lost their bearings under water and swam toward one of the sides and upon touching the side, they immediately shoved off in the opposite direction, thinking they had touched the bottom and were going upward, when actually they were swimming toward the other side. When they reached the other side and found themselves still under water, they became bewildered and tore off the blindfold in order to depend on vision for orientation. One of them stayed under water for fifteen seconds floundering and groping around for the surface and failing to find it, gave up and took off the blindfold.

Fear of losing orientation under water was very evident among some of the meningitis or poor balance cases, especially in the eyes blindfolded test. This was characterized by their

bodies becoming tense while being turned around on the rotating platform preparatory to being thrown into the water and by their swallowing some water while pawing and clawing frantically to rise to the surface. Four subjects had to be excused from the experiment when they showed lack of confidence in themselves by repeatedly letting go the hold on their legs even before hitting the water. They were excused because they could prevent themselves from becoming completely submerged by allowing a greater area of body surface to spread over the water, which enabled them to make faster time scores. There were two other subjects who refused to try the eyes blindfolded test after completing the eyes open test so their initial scores were not included in the tabulations.

Due to the criteria for the orientation tests, the trials in which the subjects failed to follow the directions properly had to be cancelled. It was at first feared that the criteria might handicap the study and limit the findings; nevertheless, at the conclusion of the experiment the results indicated that the meningitis and poor balance groups apparently differed from the other groups. If the cancelled trials or the withdrawals had been included in the tabulations, the differences between the groups might have been greater.

While it is obvious that the meningitis and poor balance groups experienced more difficulty in the orientation tests than the other groups, it must be pointed out that the experience of losing orientation under water did not occur to every subject in the meningitis group or in the poor balance group and also that no subject lost direction every time he was submerged. This was reflected by the difference in variances between the meningitis and poor balance groups and the other groups as indicated by the **F** ratios (Table 5). It is possible that the deficiency of the vestibular sense may vary in different subjects just as the deficiency of vision or hearing may vary or it might be due to the fact that these individuals are more alert to extrinsic cues such as body buoyancy.

Also, chance could easily have caused this large variance in the meningitis and poor balance groups. If they chanced to move upward toward the surface they would have excellent times; if they went to the bottom, then a poor time. The fact that the subjects in the other groups always came to the surface would account for greater homogeneity and less variance. However, the study in no way attempted to investigate individual differences within a group but rather the relationship between groups that might be expected to exist. For this reason it is difficult to determine to what extent the loss of orientation was incurred as a result of vestibular deficiency.

It is also possible that other factors may have influenced the results of the study, causing the meningitis and poor balance groups to be noticeably poorer. The fatigue element from repeated submersions could have affected the findings. Swallowing

water while trying to rise to the surface because of fear might have taken too much energy out of the subjects and slowed their times. The oft-cancelled trials of the meningitis and poor balance groups, of course, did not help them perform better during the tests. Another factor causing the poor showing may have been the establishment of only the minimum standard level of swimming ability; it was impossible to equate the subjects so the groups would have equal ability. The meningitis and poor balance cases because of their disability perhaps had had less opportunity or desire to learn to swim as compared to the other groups and this might have caused their relatively poor showing.

Summary

1. The reliability of the eyes open and eyes blindfolded tests was .74 and .85 respectively; these orientation tests were repeated by 30 subjects picked from the different groups at random.

2. All the groups, with the exception of the meningitis group in the first classification and the poor balance group in the second classification, showed an increase in the eyes blindfolded test over the eyes open test. The meningitis and poor balance groups fared less satisfactorily in the eyes blindfolded test. Of all the differences between the means of the two tests only the increase made by the good balance group was found to be significant within the 5 percent level of confidence.

3. In the eyes open test the meningitis group was the only one in the first classification that differed significantly from all the other groups; the other causes and undetermined groups differed from the meningitis group at the 5 percent level of confidence and the born deaf and normal groups at the 1 percent level of confidence. In the second classification the mean of the poor balance group was significantly different from that of the good balance group within the 1 percent level of confidence.

4. In the eyes blindfolded test none of the groups in the first classification differed significantly from the others except the meningitis group. This group differed significantly from all of the other groups at the 1 percent level of confidence. The difference between the means of the good balance and poor balance groups in the second classification was significant well beyond the 1 percent level of confidence.

5. In the two tests, the differences among the means of the born deaf, other causes, undetermined, and normal groups were not statistically significant at either the 1 percent or the 5 percent level of confidence.

Conclusion

These findings, although indicating the inability of the meningitis or poor balance groups to orient themselves under water, do not necessarily mean that they should be prohibited from swimming. It does indicate, however, that special attention must be given individuals suffering from deafness due to meningitis

both during the instructional phase and when they are swimming for recreation.

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Deafness in the Twentieth Century*

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Deafness is a problem, a serious problem, whether it occurs in the 20th century or the 18th. However, deafness may not have been as great a handicap to the individual, in some ways, in the 18th century, as in the present century, because living in the 20th century is a much more complicated matter, especially in regard to communication. Biologists tell us that hearing is possibly the most sensitive of all the senses. It is certainly more complicated in its structure than the others, all of which tends to make a hearing loss in human beings in this age of automation, a much more serious problem than it could have been in some previous century.

In speaking of deafness, I wish to make it quite clear that I am referring, in general, to people whose loss of hearing is of such a nature and extent that it is considered a severe handicap. I am not referring to that group of people who might be referred to as hard of hearing. Thus, in speaking of the severely handicapped people, deafness is, without question, a physical handicap, so much so that special schools and special classes for the deaf are provided throughout the country, where special techniques are utilized in teaching. However, because deafness is such a pronounced physical handicap, some people are led to believe that the physical aspects of deafness are the only aspects in need of consideration and research. Would that this situation were true!

Possibly paramount in the various handicaps that follow in the wake of deafness as a physical disability, is the educational handicap. When we stop to realize how much of the activity in the world in the 20th century is performed through audition alone, we are able to get a faint glimpse of how much the deaf child is deprived of because of his failure to hear what is taking place in his environment. And when we refer to the educational handicap in the field of deafness, we mean, specifically, the language handicap.

In the January 1959 issue of the AMERICAN ANNALS OF THE DEAF, over 400 speech and hearing clinics are listed in the United States. Personally, as a teacher of the deaf, I like the name Speech and Hearing Clinic, because it points out so

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vividly that deafness is composed of at least two handicaps, one in the area of hearing, and one in the area of speech. However, I wish there were some way of pointing up the fact that for the deaf at least, and I refer mainly to children who were born deaf or became deaf at an early age, that language is the great problem in rehabilitation or in teaching the deaf. We sincerely hope that all deaf children can be taught to speak and to read lips, but above all, a deaf child must be taught, either orally or manually, how to write and how to read, if he is to be able to make his own way in the world. I wish we could have in every classroom for the deaf a "lingogram" as well as an audiogram. I believe that many deaf people are more segregated from the hearing people because of their lack of an adequate education than because of their poor speech or inability to read lips. Thus, it follows that the instruction of these pupils in the schools and classes for the deaf will determine largely how well they will be accepted into the community. In spite of our improvements in electronic amplification, and with the great stress being placed on Special Education, I am forced to stop and wonder if the deaf boy or deaf girl in the United States will receive as good an education in the last half of the 20th century as he or she did during the first half.

A survey of the need for trained teachers of the deaf has been made by members of the staff of The Clarke School for the Deaf and of the Hearing and Speech Center at Gallaudet College. At present the schools and classes for the deaf in the United States are reported as needing over 500 trained teachers for next year. Speech and Hearing Centers report they need almost a hundred trained teachers of the deaf. And all of this in view of the fact that the enrollment in schools and classes for the deaf in the United States has increased over 2,000 in just the last two years. Aside from teaching the deaf-blind, the teaching of the deaf is the most arduous in the educational world. It is highly specialized. Teaching speech to a deaf child who has only a slight idea as to the meaning of sound, or no idea whatsoever, is a most difficult job, and may account, to an extent, for the few people entering the profession of teaching the deaf. It is very important to diagnose deafness, to determine its causes, and to make specific evaluations for educational procedure. But what if we lack the trained personnel to carry out the instructions of the audiologists and the otologists? And this problem does not lie in the realm of remote possibility. It is very concrete and is facing every educator of the deaf who daily is being confronted with the problem of increased enrollment and a dwindling supply of trained teachers for his staff.

Sometimes, even we teachers of the deaf, as well as the layman, forget that language for the deaf means more than being able to write a paragraph. It also means being able to read a paragraph and grasp its central meaning. For over 30 years we have been giving standard tests at Gallaudet College to students seek-

ing admission to the preparatory class and to the college itself. These students come from public residential schools, day schools, day classes, private schools and classes and denominational schools and classes. These schools represent all the various methods of teaching the deaf: oral, manual, and auditory. The pupils from all of these schools and classes are extremely weak in vocabulary and in paragraph meaning, ranking far down the scale. An employee of a large automobile firm which employed many deaf people once told me that if the written directions to workers in his factory were given in one word, the deaf could comprehend it as well as the hearing; if the directions were given in one sentence, a few of the deaf were apt to misunderstad it; but if the directions were given in a paragraph, only the exceptional deaf worker could comprehend it. The teaching of concepts to a mind that has been cut off from the world in the realm of sound is a herculean task.

Although the educational handicap ranks first in importance in the field of deafness, I would list secondly in importance the social handicap of deafness. It is all very well to say that we will integrate the deaf person into a hearing society, but unless the members of the hearing society realize the implications of deafness, it is very difficult and sometimes impossible for a deaf person to break the social barrier. It is much easier to discuss the pros and cons of a hearing loss in a clinical situation than to go out of our way in associating with a neighbor who has an extremely severe hearing loss. Because of this, we find the deaf a minority group in our society, forming their own clubs and their own churches where they find much satisfaction and a place in their own community.

Besides being an educational handicap, and a social handicap, deafness can also be an emotional handicap, even for those deaf who are well educated. When communication within one's environment breaks down for any adult person, grave complications may arise. At the 1950 International Congress on the Care of the Deaf-Mute in Groningen, The Netherlands, Dohn reported on deaf persons in mental institutions, and it was his conclusion that this was caused primarily by a breakdown in communication between the deaf patient and his environment. Although we are gathered here today to discuss deafness from the point of view of health, we must never forget that the mental health of deaf people is as important as their physical health and, in some ways, because of our increased tempo of living, even more important in this 20th century. Of all the handicaps encountered in the field of deafness, I believe that loneliness, and especially the fear of loneliness, is possibly the greatest problem for the deaf person. You and I as hearing people have been lonely, but I do not believe that we can ever quite realize the degree of loneliness that a deaf person sometimes encounters in a hearing society. We need research in so many aspects of deafness, but I certainly believe that we need more research in the field of mental health

in the realm of deafness such as is being carried on at the New York State Psychiatric Institute. In some ways I believe there is a connection between the feeling and fear of loneliness and the incidence of deaf patients in mental hospitals.

Deafness is a physical handicap, it is an educational handicap, a social handicap, an emotional handicap, and a handicap to be considered in the vocational field. If it were not for the vocational departments in residential schools for the deaf and the diligent work of the vocational rehabilitation workers, there would be far more deaf men and women on public relief. This is one of the bright spots in the field of deafness. Most deaf people have jobs and have made a reputable place for themselves in the world.

I hope I have not stressed the word *handicap* to such an extent that I have led you to believe that the case of the deaf person is hopeless. It is not. The many thousands of well adjusted deaf people in the United States are proof of what has been done, but we must be careful in judging the future entirely by the past. There is one new aspect in the field of deafness that needs careful scrutiny, and that is in the field of multiple handicaps. We list six groups in the AMERICAN ANNALS OF THE DEAF: the aphasic and deaf, the mentally retarded and deaf, the crippled and deaf, the brain injured and deaf, the deaf-blind, and the cerebral palsied and deaf. Each year the number of such pupils reported becomes larger. It may be that this situation is brought about by better diagnostic services, or that, educationally, we are becoming more aware of such problems. It may also very well be that medicine in the 20th century is saving the lives of many multiple handicapped deaf boys and girls, who twenty-five years ago, would have been in the graveyard. So many older teachers of the deaf remark that twenty-five years ago they taught a deaf child, now they teach a child who is deaf and something else, and generally the something else is as serious as the deafness. Difficult as it is to secure teachers of the deaf, imagine how much more difficult it is to find a teacher for the multiple handicapped child, who may very well be the great problem in the field of deafness in the 20th century. The medical field is doing an excellent job in saving lives, but the teaching profession has become much more complex because of it. Is a relatively uneducated multiple handicapped child going to be one of the end products of this modern twentieth century?

We need help for the deaf child. We also need help for the child who is deaf and has an additional handicap. We also need help for the parents of such children. Often a greater handicap is encountered with the parents of deaf children than with the children themselves. Helping a parent to overcome a feeling of rejection for a deaf child or a deaf mentally retarded child is the problem for the professional worker in this field. Parent education, such as is being carried on at the John Tracy Clinic in California and in many schools for the deaf is excellent, but far more services for parents must be made available.

If medicine continues saving more and more lives, even the lives of the multiple handicapped, this problem of parent education will become most acute. As we read medieval history we study the history of the Madonna in the Church, the Madonna of the fields, the Madonnas of the various groups, each pinpointing some particular idea. I am wondering if it may come to pass that the symbol of our 20th Century may be, not the atomic bomb, but the Madonna gazing in bewilderment at the handicapped child in her arms, while seeming to say to us: Why have you neglected him?

It is only through education, rehabilitation, research, and cooperative ventures such as this meeting this morning, functioning on a professional level, that such a symbol will not take its place on the pages of history.

Changes in Administration

Illinois

Dr. Kenneth R. Mangan has accepted a position in the Department of Education at the University of Illinois, Urbana, Illinois. Dr. Mangan has been principal of the Gallaudet Day School for the Deaf in St. Louis, Missouri. He was trained at the University of Wisconsin in Milwaukee and has been in educational work for the deaf in Michigan and Wisconsin.

Ohio

Merlen G. Gruenhagen has been appointed principal of the Ohio School for the Deaf, Columbus, Ohio. Mr. Gruenhagen took his training at Gallaudet College in Washington, D. C. He has had teaching experience at the South Dakota School for the Deaf, the Rochester School for the Deaf, and the day classes for the deaf in Duluth, Minnesota. He holds an advanced degree from the University of Minnesota.

Charles G. Rawlings has been appointed to the staff of the day classes for the deaf in Cincinnati where he will act as supervisor and give teacher training. Mr. Rawlings has been superintendent of the Pennsylvania Oral School for the Deaf in Scranton, Pennsylvania. He was trained at the Clarke School for the Deaf and at Gallaudet College. He has taught at the New Jersey School for the Deaf, and The Kendall School for the Deaf and was principal at the Indiana School for the Deaf and at the Central New York School for the Deaf.

Texas

Dr. Rachel Dawes Davies has been appointed the new director of Sunshine Cottage in San Antonio, Texas. She has also accepted a position as a member of the Department of Education of Trinity University in San Antonio. Dr. Davies began her career with the deaf in 1923 when she was principal of the Western Pennsylvania School for the Deaf, Pittsburgh, Pennsylvania, and director of their teacher training program.

Utah

Robert W. Tegeder was appointed Superintendent of the Utah School for the Deaf July 10, 1959. Mr. Tegeder was graduated from Concordia Teachers College, Chicago, Ill. He received his masters degree from Wayne State University, Detroit, Michigan, and his training for work with the deaf at the Western Pennsylvania School for the Deaf in Pittsburgh. He was a member of the staff of the Lutheran School for the Deaf in Detroit for seven years. For the past two years he has been principal of the Utah School. Harold W. Green, superintendent of the Utah School for the past five years, was killed in an automobile accident on June 27 while traveling to Colorado Springs to attend the meeting of the Conference.

Honors and Awards

Honor for Dr. Boatner

The officers and directors of the American School for the Deaf, West Hartford, Connecticut, presented a bronze portrait of Dr. Edmund Burke Boatner to the American School for the Deaf on January 23, 1959. It has been placed in the entry to the new Boatner Preschool Building. The bust is the work of Mrs. Frances Wadsworth of Granby, the sculptor of the Founders' Memorial on Gallaudet Square, and also of the bronze statue of Thomas Hooker on the Main Street side of the Old State House in Hartford. The unveiling was done by Miss Barbara Boatner, daughter of Dr. and Mrs. Boatner. Presentation was made by Guy B. Holt as president of the Board of Directors. The inscription on the base of the bronze portrait reads:

> "Edmund Burke Boatner to whose Wisdom, Understanding and Devotion the American School for the Deaf owes its continued leadership in the education and training of the deaf, this portrait in bronze is affectionately dedicated by the Directors of the American School, January 23, 1959."

Hoffmeyer Hall Dedicated

The Board of Directors of the North Carolina School for the Deaf, Morganton, N. C., announced at their annual May meeting the naming of the new $450,000 dormitory for boys "Hoffmeyer Hall" in honor of the school's superintendent, Ben E. Hoffmeyer. Mr. Hoffmeyer was principal of the North Carolina School from 1947 to 1955 when he was appointed superintendent of the school.

Mr. Hoffmeyer was trained to teach the deaf at The Central Institute for the Deaf in St. Louis, Missouri, and at Gallaudet College, Washington, D. C. He has been a member of the Executive Committee of the Conference of Executives of American Schools for the Deaf and was recently elected to membership on the Board of Directors of the American Instructors of the Deaf. He is chairman of the Program Committee of the Conference of Executives, and a member of the Conference Committees on Parent Education and the *American Annals of the Deaf*.

Honors at the Missouri School for the Deaf

Three members of the Missouri School for the Deaf at Fulton, Mo., were honored at Commencement in May, 1959. The new library was named in honor of Grover C. Farquhar, a teacher and librarian at the Missouri School for many years. Mr. Farquhar and G. Dewey Coats were given the Truman L. Ingle Memorial Awards for distinguished service to the deaf. Frank

O. Sanders, vocational instructor, was given a Merit Award. The honors were presented by Lloyd Harrison, Supt., the Missouri School for the Deaf.

Fifty Years in Work for the Deaf

Father Eugene Gehl, director of St. John's School for the Deaf in Milwaukee, Wisconsin, was commended in a resolution adopted by more than fifty priests who work with the deaf, at the tenth annual convention of the International Catholic Deaf Association, meeting in Cleveland, Ohio, in July, 1959. Ceremonies commemorating Father Gehl's fifty years in the priesthood, most of which were spent in work for the deaf, were held at St. John's School for the Deaf during the summer.

Sister Marie Antonia Honored

The members of the Conference of Executives of American Schools for the Deaf, meeting at the Colorado School for the Deaf in Colorado Springs, voted to send congratulations to Sister Marie Antonia of the De Paul Institute for the Deaf in Pittsburgh, commending her upon fifty years of service to the deaf. Sister Marie Antonia retired this spring from the De Paul Institute.

GALLAUDET COLLEGE HONORS

In connection with the ninety-fifth Commencement Exercises on Monday, June 1st, Gallaudet College, Washington, D. C., conferred two honorary degrees. The citations were as follows:

CITATION

Edward Watson Tillinghast

Edward Watson Tillinghast, Superintendent of the Arizona State School for the Deaf and the Blind, has a lifelong preparation for his work. He is of the fourth generation in his mother's family and the third in his father's family to be engaged in the education of the deaf. He completed undergraduate studies at the University of South Dakota and holds graduate degrees from Harvard University and from Gallaudet College, which sent him out a trained teacher of the deaf. After seven years of teaching at the California School for the Deaf at Berkeley, he was appointed to his present position, in which he has served for eighteen years.

Under his administration, his school has doubled in size, new buildings have been designed and constructed, the faculty and the curriculum have been enlarged and improved, and a teacher training program has been established in affiliation with the University of Arizona. Active in educational associations and in associations concerned with the education of the deaf, he is widely regarded as a model of skilled and devoted educational leadership.—*THE HONORARY DEGREE OF DOCTOR OF LETTERS.*

CITATION

Howard Malcolm Quigley

Howard Malcolm Quigley, Superintendent of the Minnesota School for the Deaf, holds undergraduate degrees from Gooding College and from the Masachusetts Institute of Technology, and graduate degrees from Gallaudet College and from Columbia University. For twenty-eight years he has been active in the education of the deaf: for a year in our own Kendall School as a teacher; for seven years at the Iowa School for the Deaf as teacher and principal; for six years at the Kansas School for the Deaf as superintendent; and for fourteen years in his present position.

To his profession he has brought such qualities of thought and feeling as have won him the respect and affection of all his colleagues. As vice president and president of the Conference of Executives of American Schools for the Deaf he has been sought out—and is still sought out—for counsel on educational and administrative questions of the greatest complexity. As Chairman of this Conference's Committee on Teacher Training and Certification, he has won the admiration of all for his patient efforts to maintain and improve the standards of training for teachers of the deaf.—*THE HONORARY DEGREE OF DOCTOR OF LETTERS.*

The Alpha Sigma Pi Fraternity presented its tenth annual "Man of the Year" plaque to Dr. Leonard M. Elstad, president of Gallaudet College. The honor was given in recognition of Dr. Elstad's thirty-six years of distinguished service to the deaf, especially in higher education. The bronze plaque is awarded on an international basis to a person who has made the most worthwhile contribution to the welfare of the deaf.

Mrs. Leonard M. Elstad was named "Mother of the Year" for the deaf by the Alpha Sigma Pi Fraternity for "her unusually friendly attitude toward and great interest in each student on the Gallaudet campus and for her fine qualities as hostess of the college.

The Kappa Gamma Fraternity presented for the first time a Special Merit Key Award. It was given to Dr. Powrie V. Doctor of the Gallaudet College faculty in recognition of his thirty-one years of outstanding service to the college and to the fraternity, of which he is a member. The Kappa Gamma Fraternity was founded at Gallaudet College in 1901 by Dr. Percival Hall, former president of the college.

Miscellaneous

Death of Lady Irene Ewing

Lady Irene Ewing died July 16 in Manchester, England. Lady Ewing, with her husband, Sir Alexander, have been prominent in the oral work for the deaf in England for many years. Their clinic for deaf children at The University of Manchester is world famous. The International Congress on the Educational Treatment of Deafness met at Manchester in 1958. Lady Ewing and her husband have written many books in the area of deafness.

Retirement of Dr. Madison Lee

Dr. Madison J. Lee, Supt., the Kentucky School for the Deaf, Danville, Ky., retired in June after many years in the work for the deaf. At the meeting of The Conference of Executives of American Schools for the Deaf in Colorado Springs, Colorado, Dr. Lee was elected to honorary membership in the Conference.

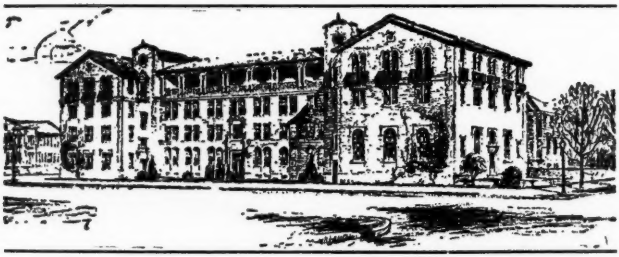
Bill Presented to Congress

A bill has been presented to Congress, S. J. Res. 127, for promoting financial aid for the training of personnel in the area of deafness, speech, and hearing. The bill has the support of the members of The Conference of Executives of American Schools for the Deaf, the members of the American Instructors of the Deaf, and of the Alexander Graham Bell Association for the Deaf, Inc.

Gough Appointed Director of Captioned Films

John A. Gough, formerly Principal of The Kendall School, Gallaudet College, Washington, D. C., has been appointed Education Research and Program Specialist, Captioned Film Program for the Deaf, Office of Education, Department of Health, Education, and Welfare. The Captioned Film program is a new department in the Office of Education. Mr. Gough has had much experience in the education of the deaf and in visual education. He is very well qualified for the position.

THE Language Outline prepared by the members of the faculty at Central Institute for the Deaf, St. Louis, Mo., has been reprinted for the fourth time since it was originally published in the AMERICAN ANNALS OF THE DEAF in September, 1950. Copies may be obtained for fifty cents. Orders may be sent to the AMERICAN ANNALS OF THE DEAF, Gallaudet College, Washington 2, D. C.



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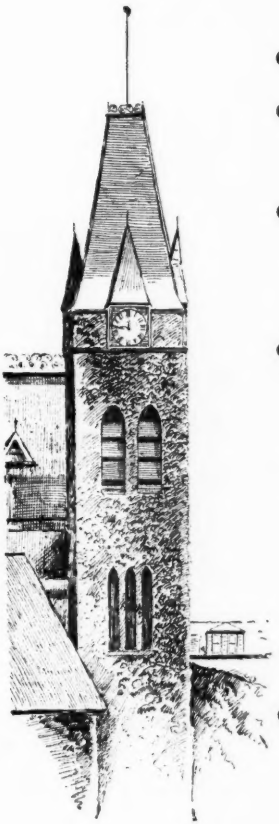

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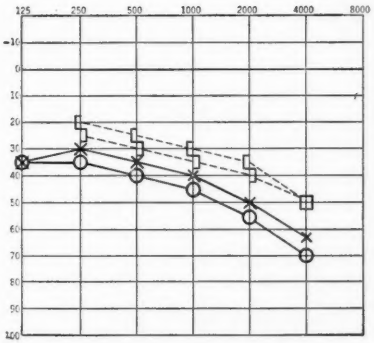

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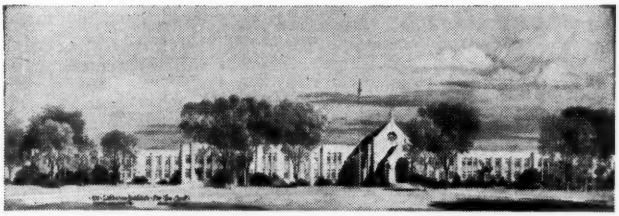

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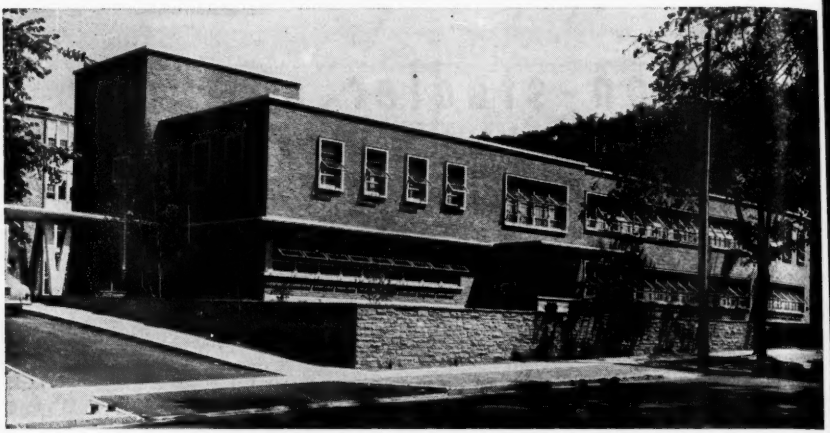

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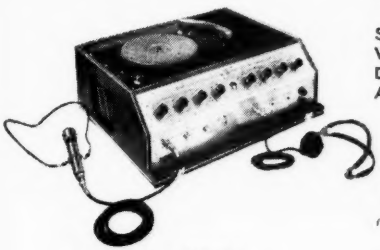

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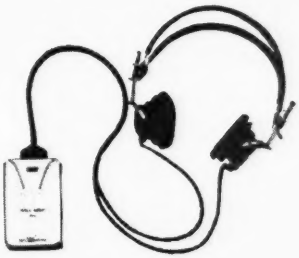

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NATIONAL DEAF CHILDREN'S SOCIETY
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Care of the Deaf in England

by

J. B. PERRY ROBINSON

96 pages

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INFORMATION FOR PARENTS OF DEAF CHILDREN

The members of the Conference of Executives of American Schools for the Deaf, founded in the year 1868, have arranged for periodic distribution of packets of reprints for parents of deaf children. It is the desire of the Conference members to help the parents become more acutely aware of the educational aspects of deafness and the potentialities of their children with impaired hearing.

The AMERICAN ANNALS OF THE DEAF, Gallaudet College, Washington 2, D. C., the official journal of the Conference of Executives of American Schools for the Deaf, is the distributing agent for these packets.

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EB AUDITORY TRAINER

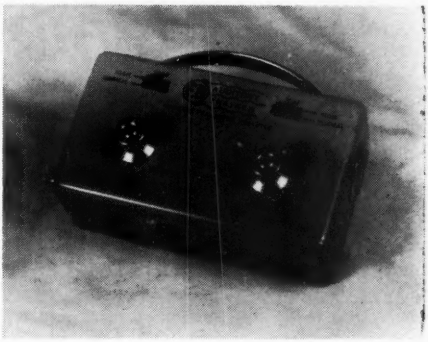
TWO CHANNEL DESK TYPE HEARING AMPLIFIER WITH DUAL TONE CONTROLS!

portable true binaural all transistor amplifier engineered for the aid of hearing

This compact, low noise, high fidelity unit is composed of two separate amplifiers, each having its own microphone, volume control and two position tone control.

Maximum power output delivered with extremely low distortion.

Internal and external surface noise reduced to a minimum through advanced design and use of high quality components.



Specially designed for:

USE IN SCHOOLS—Auditory training

USE IN THE HOME—TV or radio listening or for normal conversation

USE IN THE OFFICE—Special telephone attachment available at slight extra cost

Features . . .

- Completely transistorized—rugged—stable.
- Battery operated—uses popular type leakproof mercury batteries (approximately one year reliable operation with normal use.)
- Tone Control: 2 position—
  NORMAL: For flat response.
  HIGH: For boost of frequencies above 1000 cps.
  Permits individual compensation for each ear.
- Extremely stable high gain, low noise amplifiers.
- Noiseless volume control.
- Fully guaranteed for period of one year.
- Weight: 1 lb. (without headset)
- Size: 2" x 3" x 5¼".

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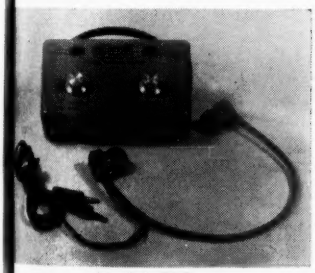

Model 31S

Basic amplifier with lightweight insert type earphones. Easily removable eartips can be replaced with earmolds.

FREQUENCEY RESPONSE:
100-6000 cps

POWER OUTPUT:
135 db above threshold

Both these models utilize same basic amplifier. Type of headset determines model number.

PRICES

Quantity	MODEL 31S	MODEL 31HF
	each	each
1	$195	$205
2-4	175	185
5-9	165	175
10 & Over	150	160

• • •

Model 31HF

Basic amplifier with high fidelity dynamic earphones.

FREQUENCY RESPONSE:
100-8000 cps

POWER OUTPUT:
120 db above threshold

A Product of . . .

Eckstein Bros.

424 NORTH VERMONT AVENUE • LOS ANGELES 4, CALIFORNIA

Manufacturers of Quality Products in Medical Electronics

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